

REMARKS

The Office Action dated August 5, 2010 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-20, 23-25, and 27-32 are currently pending and respectfully submitted for consideration.

Claims 1-20, 23-25 and 27-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,058,423 to Ahmavaara (“Ahmavaara”) in view of U.S. Patent Publication No. 2002/0059434 to Karaoguz et al. (“Karaoguz”). This rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 2-20 are dependent, recites a method including receiving, from a mobile network, an indication at a multimode terminal operably connected to the mobile network. The indication indicates that services may be locally available via at least one short-range wireless network. The method further includes, based on the indication, collecting service information about services for the multimode terminal available through at least one short-range radio interface of the multimode terminal, and, based on the service information collected, compiling a service list describing at least one service available through the at least one short-range radio interface.

Claim 27, upon which claims 23-25 and 28-31 are dependent, recites an apparatus including a first radio interface operably connectable to a mobile network, and at least one short-range radio interface. The apparatus further includes a receiver configured to

receive an indication, from the mobile network, through the first radio interface. The indication indicates that services may be locally available for the multimode terminal via at least one short-range wireless network. The apparatus also includes a controller configured to collect service information about services available via at least one of the at least one short-range wireless network, and compile a service list based on the service information collected. The service list describes at least one service available via the at least one of the at least one short-range wireless network.

Claim 32 recites an apparatus including a first radio interface operably connectable to a mobile network, and at least one short-range radio interface. The apparatus also includes receiving means for receiving an indication, from the mobile network, through the first radio interface. The indication indicates that services may be locally available for the multimode terminal via at least one short-range wireless network. The apparatus further includes information collection means, responsive to the reception means, for collecting service information about services available via at least one of the at least one short-range wireless network, and service indication means for compiling a service list based on the service information collected. The service list describes at least one service available via the at least one of the at least one short-range wireless network.

As will be discussed below, Ahmavaara and Karaoguz fail to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above.

Ahmavaara describes FIG. 1 shows generally the architecture proposed for UMTS. A mobile station (MS) 1 can communicate by radio with one or more base stations (BS) 2. Each base station is linked by an Iub interface 3 to a single radio network controller (RNC) 4. Each RNC can be linked to one or more BSs. An RNC can be linked to another RNC by an Iur interface 5. Each RNC is linked by an Iu interface 6 to a core network (CN) 7. The CN includes one or more serving nodes that can provide communication services to a connected mobile station, for example a mobile switching centre (MSC) or a serving GPRS (general packet radio service) support node (SGSN) 8. These units are connected by the Iu interface to the RNCs. The CN is also connected to other telecommunications networks 9 such as fixed line networks or other mobile networks to allow onward connection of communications outside the UMTS network. The CN also includes other units such as a home location register (HLR) 10 and a visitor location register (VLR) 11 which help to control access to the network.

Karaoguz discloses systems and methods for implementing multi-mode wireless communication devices such as PDAs or multi-function mobile phones that take advantage of the wireless networks in their proximity. In the case where a nearby wireless network happens to provide more data bandwidth and/or better quality of service, a multi-mode wireless device may switch to that particular wireless network to access these services. A multi-mode controller in the device may be used to alternately poll different networks to determine whether the device is within the area of coverage of a network and to selectively establish communications with those networks.

Applicants respectfully submit that Ahmavaara and Karaoguz fail to disclose or suggest all of the elements of the present claims. For example, Ahmavaara and Karaoguz, individually or combined, do not disclose or suggest, at least, “receiving, from a mobile network, an indication at a multimode terminal operably connected to the mobile network, the indication indicating that services may be locally available via at least one short-range wireless network,” as recited in claim 1. Similarly, Ahmavaara and Karaoguz fail to disclose or suggest “a receiver configured to receive an indication, from the mobile network, through the first radio interface, the indication indicating that services may be locally available for the multimode terminal via at least one short-range wireless network,” as recited in claim 27 and similarly recited in claim 32.

Instead, Ahmavaara describes a configuration in which the mobile network is used to transmit information on services available via the same mobile network. For instance, in column 3, lines 20-40, Ahmavaara describes that “suitably, the intermediate network is capable of transmitting to a mobile station an indication of one or a plurality of serving network entities and the communications services provided by each one. Preferably, in order to receive a desired service a mobile station is capable of determining one of the serving network entities indicated as providing that service and attempting to establish a connection with that serving network entity via the intermediate network.” (Emphasis added) Clearly, Ahmavaara describes that the information about the services available is transmitted via the same network that transmits the actual services.

In addition, in column 5, lines 15-30, Ahmavaara provides that the MS receives from the UTRAN a message indicating the available domains and the services offered/supported by each. In addition, in column 5, line 6, Ahmavaara explains that CN [=Core Network] domains are CN nodes. Thus, in Ahmavaara, the MS selects one or more appropriate CN nodes for providing the required services. The services are available via the same mobile network.

Karaoguz does not cure the deficiencies of Ahmavaara. Rather, Karagouz describes that knowledge about services available via the short-range networks is obtained via the same short-range networks. (Emphasis added) In paragraph [0017], the IEEE 802.11b controller disclosed by Karaoguz corresponds to a WLAN controller; thus, Karagouz discloses a dual-mode controller for Bluetooth and WLAN short-range networks. Although Karaoguz describes that a “multimode controller 80 receives network information 88 indicative of whether the device is within range of a supported network” (Karaoguz, paragraph [0044]), Karaoguz does not disclose that this network information is received from the mobile network. Karaoguz instead describes that knowledge about services available via short-range networks is obtained via the same short-range networks.

The Office Action provides a hypothetical combination in which “short-range radio interface” and “short-range wireless network” are substituted for the second occurrence of “mobile network” in the description of Ahmavaara, but not the first occurrence of “mobile network”. By making this hypothetical combination, the Office

Action introduces the feature that information on services available via short-range wireless network(s) is transmitted via an entirely different network, namely the mobile network. However, this new feature is not disclosed by either Ahmavaara nor Karaoguz, which is why the hypothetical combination made in the Office Action appears to be a piecemeal combination.

It appears that, according to Karaoguz, the device itself informs the multimode controller of whether the device is within range of a supported network. In other words, according to Karaoguz, the network information is provided by the device, not by the mobile network. In particular, paragraph [0035] of Karaoguz provides that “each multi-mode communication device 30 or 34 determines whether it is within the area of coverage of a type of network that is supported by the multi-mode communication device” (Karaoguz, paragraph [0035]). Nowhere does Karaoguz disclose receiving an indication indicating that services may be available via a short-range wireless network **from the mobile network**. (Emphasis added) FIG. 4 of Karaoguz, and the corresponding sections of the description (paragraphs [0044]-[0050]), does not disclose that the “network information” is received from an outside source, such as the mobile network.

Furthermore, in the entire disclosure of Ahmavaara, the term “network” refers to services provided by Core Network (CN) nodes or domains via the UTRAN. As taught by Ahmavaara, the mobile station receives knowledge of services provided by CN nodes (domains) via the UTRAN nodes (BS and RNC nodes). A person of ordinary skill in the

art can only conclude that the configuration of Ahmavaara can only mean that knowledge about services available is sent and received via the same transmission path as the actual services. Ahmavaara only discloses that the information about the services available is transmitted via the same network that transmits the actual services (in Ahmavaara that network is the mobile network, which consists of the Core Network and the UTRAN, as disclosed in Figure 1 and its description.)

FIG. 14 of Karaoguz discloses explicitly how the presence or absence of short-range networks (Bluetooth or 802.11) is detected, and the result of such detection is the “network information 88” shown in FIG. 4. In connection with FIG. 14, Karaoguz discloses that the detection of short-range networks (Blue-tooth or 802.11) is initiated in step 232: “In the absence of any network connection, the dual-mode controller initiates a new network scan request 232 every ‘CFP Maximum Duration’ per 802.11b MAC specification” (Karaoguz, paragraph [0086]). Because the “dual-mode controller,” which is an embodiment of the “multi-mode controller,” resides in the communication device (terminal), it is the terminal and not the mobile network that initiates the detection of short-range networks.

Karagouz discloses that the dual-mode controller for Bluetooth and WLAN short-range networks spontaneously detects the presence of such short-range networks. Karagouz discloses that the information about the services available is obtained via the same network via which the communication services are obtained (in Karagouz those networks are the short-range networks, namely Bluetooth or WLAN). Therefore, a

combination of Ahmavaara and Karaoguz can only provide that the information about the services available is transmitted via the same network that transmits the actual services (in Ahmavaara such information is transmitted to the mobile station, while in Karaoguz the communication device includes the multi-mode controller detects the networks and obtains the information itself).

Therefore, for at least the reasons outlined above, Ahmavaara and Karaoguz, individually or combined, do not disclose or suggest, at least, “receiving, from a mobile network, an indication at a multimode terminal operably connected to the mobile network, the indication indicating that services may be locally available via at least one short-range wireless network,” as recited in claim 1. Similarly, Karaoguz fails to disclose or suggest “a receiver configured to receive an indication, from the mobile network, through the first radio interface, the indication indicating that services may be locally available for the multimode terminal via at least one short-range wireless network,” as recited in claim 27 and similarly recited in claim 32.

Furthermore, Applicants respectfully submit that Ahmavaara and Karaoguz fail to disclose or suggest, “controlling the multimode terminal to a power save state with respect to a short-range radio interface after service information is collected through that short-range radio interface, or when no network is detected through that short-range radio interface,” as recited in claim 4 and similarly recited in claim 30. Ahmavaara and Karaoguz are silent regarding any power save functionality. Karaoguz occasionally uses the term “idle,” but those of ordinary skill in the art would recognize that a power save

state with respect to a short-range radio interface means powering off (not simply failing to transmit by) the short-range radio interface. Thus, Ahmavaara and Karaoguz fails to disclose or suggest the limitations of claims 4 and 30.

Claims 2-20, 23-25 and 28-31 are dependent upon claims 1 and 27, respectively. As such, claims 2-20, 23-25 and 28-31 should be allowed for at least their dependence upon claims 1 and 27, and for the specific limitations recited therein.

For at least the reasons discussed above, Applicants respectfully submit that Karaoguz fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-20, 23-25, and 27-32 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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